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ABSTRACT

IN ORDER TO DETERMINE THE FEASIBILITY OF BRINGING OUTSTANDING TEACHERS TO THE HIGH SCHOOL CLASSROOM, 5 SMALL COLORADO SCHOOLS EXAMINED MULTI-SCHOOL SHARING OF INFORMATION THROUGH USE OF LONG-DISTANCE CONFERENCE TELEPHONE CALLS. THREE OF THE EXPERIMENTS INVOLVED COLLEGE PROFESSORS LECTURING VIA TELEPHONE TO HIGH SCHOOL STUDENTS IN AMERICAN HISTORY CLASSES. THE STUDENTS RESPONDED WITH QUESTIONS, THUS CREATING A LIMITED 2-WAY COMMUNICATION WHICH IS NOT POSSIBLE WITH TELEVISION, TAPE RECORDERS, AND RADIO MEDIA. THE INSTRUCTORS FELT THAT THEIR STUDENTS BENEFITED FROM THE EXPERIMENTS AND THAT TELEPHONE USE HAS MANY UNEXPLORED POSSIBILITIES AS A TEACHING DEVICE. THE DOCUMENT IS APPENDED WITH PROJECT COSTS (FINANCIAL AND TECHNICAL ASSISTANCE WAS PROVIDED BY THE MOUNTAIN STATES TELEPHONE CO.) AND WITH THE QUESTIONNAIRES USED IN EVALUATING THE STUDY. (AN)

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COLORADO WESTERN STATES SMALL SCHOOLS PROJECT

DOCUMENTATION

THE TELEPHONE METHOD OF TEACHING

Thomas Beattie - Paul Frick
Telluride High School

[1963]

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COLO. STATE DEPT. OF
EDUCATION · DENVER
BYRON W. HANSFORD
COMMISSIONER

THE WESTERN STATES SMALL SCHOOLS PROJECT

The Western States Small Schools Project, partly financed by a grant from the Ford Foundation, is designed to help the state education agencies in Colorado, Arizona, Nevada, New Mexico, and Utah in their efforts to improve instruction in the necessarily existent small schools. The Project began January, 1961 and will end August, 1965. Policy Board of the Project is composed of the chief state school officers of the cooperating states. Ralph G. Bohrson, Coordinator of the WSSSP, is headquartered in Denver, at the Colorado State Department of Education.

The Colorado portion of the Project, involving more than two hundred teachers and administrators in approximately thirty schools has been working in the following areas:

-- Ungraded or Continuous Progress Programs

-- Use of Self-Instructional Materials

-- Teacher Education and In-Service Programs

-- Institutes for Rural School Board Members

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THE TELEPHONE METHOD OF TEACHING

By

THOMAS A. BEATTIE

Paul S. Frick

During the months of April and May, 1963, a project utilizing the long distance telephone as a teaching device was conducted in selected small high schools in Western Colorado. The purpose of this project was to test the feasibility of using the long distance telephone to bring outstanding teachers to the typical high school classroom. Also of import, was the testing of several new telephone devices designed to improve the transmitting of the human voice to groups of listners. This project was conducted with funds, equipment and technical assistance contributed by the Western States Small Schools Project and the Mountain States Telephone and Telegraph Company.[1]

General Plan

The general plan for this project was to demonstrate that several schools located in widely separated and isolated sections of Western Colorado could be connected to a central point to permit the conducting of a class in all the locations simultaneously. Utilizing the conference telephone facilities of the Mountain States Telephone Company, high schools located in Rangely, Meeker, Colbran, Silverton and Telluride, Colorado were connected to Gunnison, Colorado.[2] At Gunnison, interested professors at Western State College were to cooperate to provide the instruction to the schools.

1 For initial budget see Addendum I

2 For location and distance map see Addendum II

Lecture Procedure

At a meeting held on the campus of Western State College in Gunnison, plans for the series of lectures were formulated. The participating teachers, administrators and the cooperating professors decided that the presentations might serve best if they were designed to provide motivational interest to the students who would be participating.[3] It was felt that motivation could be stimulated in the students because of the novelty of the arrangement. The ego satisfaction generated by their involvement with a college professor and by the nature of the material presented in the lectures. The possibilities of the two-way communication which the telephone permitted were discussed and the group favored the inclusion of a student question period with the lecturing professor.

At this meeting, several plans were considered for the presentation of the lectures. These plans were as follows:

1. A thirty-minute lecture followed by a ten-minute question formulating period which would be followed by a twenty-minute question period.
2. A thirty-minute lecture followed by a thirty-minute question period on the day following.
3. A thirty-minute lecture followed by a one hour break to formulate questions. After the one hour break, the schools would then be reconnected to Gunnison to ask the questions.
4. A thirty-minute lecture with each school making its own arrangements to go back to the professor with questions.

The first of these plans was attempted with the first lecture. These findings were determined as a result of the first lecture:

1. Participating teachers did not feel that a ten minute question

3 See Addendum III for names

formulating period provided sufficient time for the students to come up with meaningful questions. These reasons were given by the participating teachers:

a. A certain amount of hiatus prevails after hearing a stimulating lecture. It was felt that a period of time was required for the students to "shift gears" from the listening process to the question formulating process. A ten-minute period was too short for the entire process.

b. Since all schools participating had not followed the same sequence in reaching the areas to be covered in the lectures, teachers felt that some review and research would assist the students in the formation of meaningful questions.

c. Those schools with larger classes divided their students into smaller groups to facilitate their participation in the formation of questions. This required some movement of the groups to other rooms which took some time from the question formulating period.

d. Due to the nature of the conference connection, it was more feasible to keep the group connected during the ten minute period than to disconnect and reconnect. The ten minute period would then be charged for even though it was of little tangible benefit to the schools.

2. The participating schools did not feel that the twenty minute question period provided sufficient time to make this part of the presentation as valuable as it could be. Since each school had only enough time to ask one question, interest in some schools tended to lag at the end of the presentation.

3. In order to permit each school to ask one question, the time limit

for the phono-lesson was exceeded causing scheduling difficulties in some of the schools in the period following the presentation.

Plan two was attempted for lecture two. This plan worked well and was much favored by all the participating schools. It was favored for the following reasons:

1. The quality of the questions improved greatly when the students were not under pressure to produce.
2. Some research and review was possible at the end of the period on the day of the lecture and an assignment could be given for the following day.
3. The participating teachers had more time to audit the questions of the students and to select the best ones to ask the professor.
4. A longer question period was possible. In the second presentation, a total of fifteen questions were asked in a thirty-five minute period. Some of the participating teachers felt that lengthening the question period would be of benefit.

Plans three and four were not attempted during this experiment because of the success realized with plan two.

No attempt was made to select the students who would participate in the lectures. The classes were made up of typical high school students with typical ranges of ability. The schools participating selected their American History classes to attend the lectures since each school offered this course. In order to apprise the participating professors of the types of texts used and the location of their students in the text, the schools sent a copy of their text to Gunnison.

At the meeting in Gunnison, the lecture topics were selected and the participating professors named. The lecture topics, professors and dates were as follows:

"The Roaring 20's" by William Edmondson on April 25
"The Depression Decade" by Duane Vandenbusche on May 2
"Hot War - Cold War" by Daniel Day on May 9

All of the lectures were scheduled for 11 a.m. Each participating teacher was encouraged to use visual aids before, during and after each lecture. The preparation of coordinated visuals for each school was not possible due to the lack of time.

The professors were informed of the makeup of the various classes and how the material presented in the lectures would be used for motivational purposes. Each school was furnished an 11" x 14" picture of each of the professors for display during the lecture.

Lectures one and two dealt with social history. These presentations were very colorful and were well received by the students, teachers and observers. Lecture three was more academic in nature and the interest span of some of the students was stretched beyond their capacity. Since the third lecture was more typical of a college lecture, these conclusions can be made for a lecture of this type:

1. Lectures to a typical high school class cannot be too "high powered" if all the group is to be attentive and benefit from the material being presented.
2. A lecture of over thirty minutes duration to a high school class will require a special approach if the students are to remain attentive during the entire presentation. This special approach might include some form of visual aid to be shown in conjunction with the lecture.

As a result of the three lectures and from information gathered from a series of surveys, the following general conclusions can be drawn:

1. The lecturer should experiment with the telephone equipment to

be used in order to familiarize himself with its operation and its limitations. A typical problem that might occur is the trailing off of the lecturer's voice at the end of a sentence. If this happens, it is extremely difficult to follow the lecture.

2. The interest level remains high if the lecturer includes humor and pathos.
3. The academic lecture has apparently limited potential for the typical high school class.
4. Sufficient time should be allowed for the formulation of questions.
5. The telephone has one great advantage over other communications media such as educational television, tape recordings and radio because it permits two way communication.
6. The participating teachers generally agreed that in this experiment, Lecture One did provide a motivational stimulus to the students. Technical problems in Lecture Two prevented a clear-cut decision as to how much motivation was generated. In Lecture Three, because of the nature of the lecture, it was generally agreed that only the brighter students were motivated.
7. Students enjoy this means of communication and most feel that it is of benefit to them in their studies.
8. There was some question on the part of several of the participating teachers as to whether the value of the lectures was outweighed by problems created in rescheduling classes. If schools participating in a series of lectures could coordinate their schedules in advance, the problem would not occur.
9. Parents were favorable to the use of the telephone as a teaching device and most indicated they would be interested in attending a demonstration of the telephones use.

The Equipment Used

Several types of equipment were used by the schools in this experiment. This equipment included the 3-A speaker phone, the 3-A speaker phone modified with a #106 speaker, a tandem connection of several 3-A speaker phones connected together by means of a specially developed switching console.[6] The 3-A speaker phone consists of a microphone and an amplifying speaker. Use of the speaker phone eliminates the need for using the usual hand set. The 3-A equipment has been in use for some time by business where the convenience of the microphone and speaker have been proven. In adapting this equipment for use in the classroom, the following should be considered when using the 3-A speaker:

1. The range of the 3-A speaker is limited and the quality of the reproduction diminishes as the number of listeners increases. From our experiments, 20-30 listeners under ideal conditions is the maximum number if only one speaker is used. The number of listeners per speaker is directly related to number two below.
2. The size of the room limits the effective range of the speaker. Generally speaking, the smaller the room, the better the reception. If the size of the room increases beyond 400 square feet the quality of the reception decreases proportionally.[7]
3. The 3-A speaker does not appear to transmit treble tones well. A great deal of difficulty was experienced by all the schools in the transmission of girls' voices.
4. When the microphone is being used, the speaker does not operate. This requires that only one person talk at a time.

6 This equipment was specially developed for the Western States Small Schools Project by the Mountain States Telephone Company

7 Reception was good to poor in a room of 900 square feet with a small group participating

The following should be considered when using the microphone attached to the 3-A speaker:

1. The person using the speaker phone should be within three feet of the mircophone if the best voice reproduction is to be had. The microphone is directional and the person speaking should be directly in front of it.
2. The microphone has the tendency to clip off the first syllable of a word spoken after a long pause.
3. Treble tones are not effectively reproduced.
4. The off-button is sensitive and care must be exercised if the microphone is moved during a presentation to avoid the possibility of being disconnected.

In all schools where a telephone technician was present during the presentation, it was unanimously reported that the assistance rendered materially improved the presentation. In some areas, particularly in Silverton, and to a lesser extent, Meeker, transmission problems presented during the series of calls make the use of the telephone in the schools of questionable value at this time. In cases where line noise was present to a disturbing extent, it was found that by reversing the connecting procedure whereby the school originated the call rather than the conference operator, an improvement in transmission quality was often possible. This improvement came in areas that were not on the dial system where the local operators had some flexibility in selecting the best long distance line that was available to them. Since most telephones today are on the dial system and the likelihood is that all will be in the near future, this selectivity of the local offices will be eliminated.

In the first lecture, there were only minor technical difficulties with the conference connection. The difficulties that did arise were due

to a lack of familiarity with the equipment and its operation. Two schools were disconnected at the end of the presentation of the lecture due to the fact that they did not realize that the conference circuit was to be maintained during the ten minute question formulating period. The schools reported that the reception ranged from good to excellent for the entire presentation. Some difficulty arose during the question period when students asking questions had some difficulty in making their questions heard by the lecturer. These difficulties were caused by the following factors:

1. The person speaking was too far from the microphone.
2. A poor quality of speaking voice due to inexperience or "stage fright."
3. High pitched voices did not transmit well and were difficult to understand.

Some difficulty was experienced during the lecture at times when the professor's voice trailed off at the end of a sentence.

In Lecture Two, the procedure was changed substantially as already mentioned. Unusual and unexplainable technical difficulties arose during the lecture portion of this presentation. For reasons beyond the control of the Telephone Company, several of the schools experienced great difficulties. One schcol was disconnected three times and missed most of the lecture. A severe windstorm had occurred during the period of this presentation and the Telephone Company had unusual technical difficulties which they were unaware of until the lecture was over.

In Telluride, the reception was excellent. The only difficulty that arose came about when a student accidently disconnected the phone and several minutes were required to be reconnected by the conference operator. The question period on the following day proceeded excellently.

The only difficulties that arose came about when students experienced the same problems in using the equipment that have been previously mentioned.

The third experiment proceeded without any difficulties. The reception was reported to be good to excellent and all the participating schools were favorably impressed with the operation of the equipment. Silverton reported some line noise but not enough to interfere with the presentation.

Other Experiments Using the Telephone

The fourth experiment conducted did not involve students. In this experiment, all of the participating schools were connected in a conference circuit to Western State College in Gunnison. The purpose of this call was to demonstrate the possibilities of using the telephone for a joint faculty meeting. No difficulties were experienced in this call. The participating schools were given the opportunity to give their impressions of the use that the telephone equipment had been put to in their schools. All of the schools expressed confidence in the future of this means of communication and each expressed an interest in pursuing the use of the telephone during the next school year.

At Telluride, two additional experiments using the special equipment were conducted. These two experiments did not require a conference circuit. The first of these experiments had as its purpose, the demonstration of a class being taught in two remote schools simultaneously.[4] In this experiment, students in a high school class in Rangely and in Telluride conducted a poetry program.

As a result of this experiment, the following should be considered:

1. Poetry is probably one of the most difficult areas to attempt by telephone. The difficulty arises because of the abstract nature of a poem. If the listener misses a key word or idea in a poem, the entire poem may be meaningless. In this experiment, the inexperience of the group using the equipment caused some of the problems which made parts of the presentation of questionable value. Those portions of the program that were handled by the participating teachers were excellent. There is no question

4 This method is currently under study at Colorado University and the University of Omaha on the college level

that this method of using the telephone has many possibilities for the schools. The groups using the equipment should have some experience before a program is planned.

2. Where only one microphone is available to twelve or more students, if each student is to participate in a presentation, some difficulty occurs in the organization of the presentation. The problem that causes the most difficulty is in getting the students to and from the microphone. If some care is not taken the presentation may lag and an undue amount of noise may be created. In Telluride, where only one microphone was in use, the students were lined up in front of the microphone which was placed about five feet from the floor. This permitted the students to stand in front of the microphone and to leave quickly and quietly when they were finished with their part of the presentation. In Rangely, where multiple microphones were in use, this problem did not occur. Some difficulty did occur at Rangely when the switching from one microphone to the next did not proceed smoothly.

The second experiment in Telluride tested the idea of showing a series of color slides to a class with the lecturer describing the slides from a remote location using the telephone.[5]

This experiment was conducted on an elementary school level with 45 students from Grades 3, 4 and 5 participating. In the first portion of the presentation, a slide was shown and described by the lecturer. A question period followed immediately with the students asking the question of a moderator who relayed the question to the lecturer. It was found that this arrangement did not work satisfactorily due to the fact

5 The lecturer described his slides from his home in Telluride. This presentation could just as well have originated from a location many miles away.

that each child wanted to ask a question after each slide and this caused considerable confusion.

A second method was tried which worked well. During the second part of the presentation, all the slides were shown in order with the lecturer describing them as we went along. At the end of the slides, each child was given the opportunity of asking one question.

The students, their teachers and the authors were most enthusiastic over this experiment. There is no doubt that this method of using the telephone can find a wide application for all grades and in most subject areas.

Other schools used the telephone in different experimental ways. No description of these experiments is available at this time.

Summary

The use of the telephone in this series of presentations indicates that a sharing of information on a multi-school basis can be motivating to the students who participate. While this media does open new possibilities for two-way communication, the actual amount of two-way communication was somewhat limited. For the purposes of this project, the original plan to connect several schools to a central point was closely followed and this arrangement worked well.

It is felt that true two-way communication did not exist since there was little provision for spontaneity on the part of the students. The professors did react spontaneously to the questions of the students and this part of each presentation was most impressive to the participating teachers and administrators. It would appear then, that the telephone has many possibilities for true two-way communication that this project did not adequately test.

Since the participating students shared a common experience, some consideration might be given to methods that might implement this commonality in other ways. Perhaps the sharing of reference or enriching materials recommended by the professor would also motivate the students. The exchanging of classes several times during the school year whereby contiguous schools would share classroom experiences might be considered.

There is a great need, especially in the small high school, to expose the bright students of one high school to bright students in other schools. Using a common experience created through the use of the telephone, schools interested in providing their students with unique experiences might consider ways to capitalize on the motivational possibilities which seem, at this point, to be limitless.

It is felt that additional experimentation is required before schools

in general will adopt the usage of the telephone as a teaching device. This is because of the fact that the equipment currently available is still in the developmental stage and in its present state is somewhat limited in its usability.

It would appear then, that the continued cooperation of the schools with the telephone company evinced in this project will certainly overcome problems that are now evident. It is anticipated that this project is the first of many projects that will ultimately demonstrate the feasibility of using the long distance telephone as a teaching device.

Addendum I

Financial assistance from the Western States Small Schools Project:

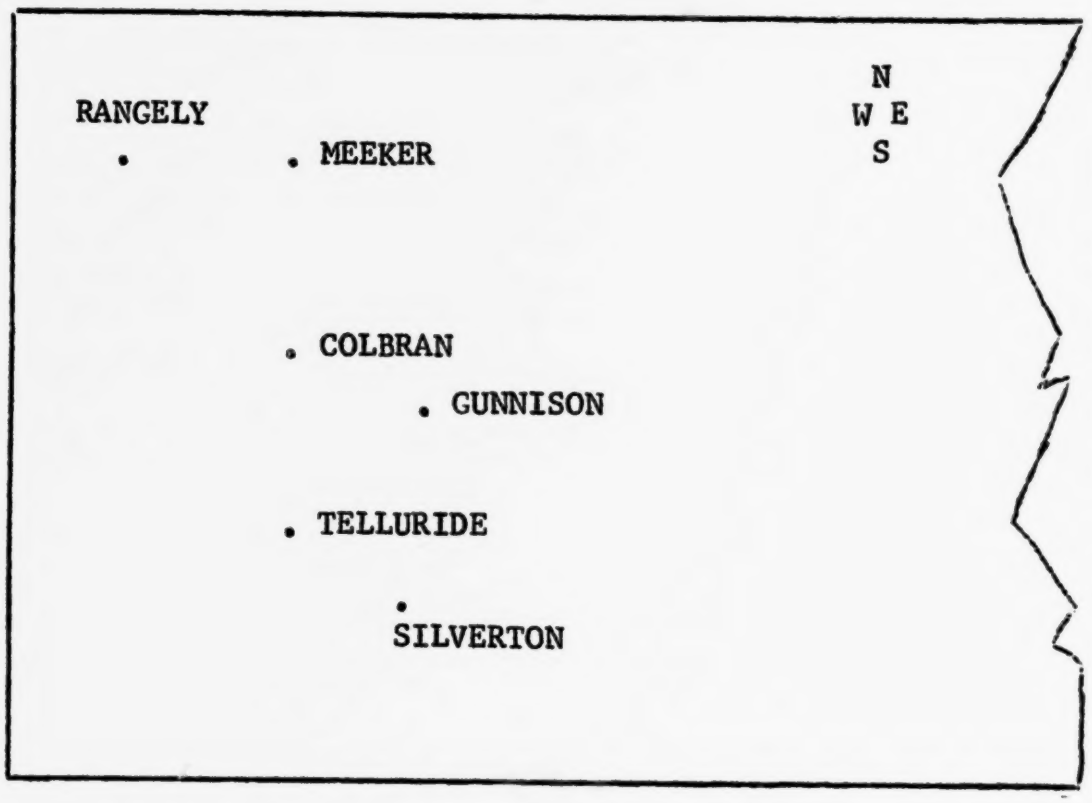
1.	Principal investigator for documentation	$300.00
2.	Multiplication of visuals	50.00
3.	Travel for teachers	200.00
4.	Photography	75.00
	Total Budgeted	$625.00

Financial and technical assistance furnished by the Mountain States Telephone and Telegraph Company:

1. Technical coordination
2. Special equipment for six locations
3. Toll charge payments for a maximum of five hours of six terminal net

Addendum II

Map of location of participating schools with chart of mileage to Gunnison



Airline miles to Gunnison

Rangely	145
Meeker	117
Colbran	72
Telluride	61
Silverton	61
Total	456

Road miles to Gunnison

Rangely	265
Meeker	245
Colbran	168
Telluride	130
Silverton	124
Total	912

It is interesting to note that a lecturer would have to drive over 1800 miles to visit each individual school

Addendum III

Names of participating teachers and administrators

Rangely High School

William Shanahan, Participating Teacher

Robert Wallendorf, Principal

Meeker High School

Richard Castle, Participating Teacher

Robert King, Superintendent of Schools

Plateau Valley High School, Colbran

James Rowbotham, Participating Teacher

C. L. Kinney, Superintendent of Schools

Silverton High School

Norman Higgs, Participating Teacher

Henry McMillan, Superintendent of Schools

Telluride High School

Thomas Beattie, Participating Teacher

Paul Frick, Superintendent of Schools

Coordinator for the Mountain States Telephone Company

Neil Ahearn

Coordinators for Western States Small Schools Project

Frank Anderson

Paul Nachtigal

WESTERN STATES SMALL SCHOOLS PROJECT
TELEPHONE LECTURE QUESTIONNAIRE

Date_____Your School_____Your Grade_____

1. Were you able to hear all of the professor's lecture clearly? Yes No

   If your answer is No, circle the reason(s): Not enough volume, too much static or interference, too much noise in the room, too much noise outside the room, other reasons_____

2. Could you hear the other schools clearly? Yes No

   If your answer is No, circle the school(s) you could not hear: Silverton, Rangely, Meeker, Colbran, Telluride. Did this condition occur during all or part of the presentation? All Part

3. Circle the type of room in which you heard the lecture: Library, classroom, auditorium, other_____

4. Do you think that this room was adequate for the equipment used? Yes No

5. Approximately how many were present in your room?_____

   Do you think there were too many present? Yes No

6. How would you evaluate the presentation? (Circle)

   Excellent, Good, Fair, Poor

7. This program was divided into three portions: First portion, the lecture (30 min.) middle portion, the question formulating (10 min.), last portion, the discussion portion (20 min.). Check the appropriate answers below:

   The first portion was too long_____, Just right_____, Too short_____
   The middle portion was too long_____, Just right_____, Too short_____
   The last portion was too long_____, Just right_____, Too short_____

8. Would the use of the telephone as demonstrated add to your <u>interest</u> in school subjects if used in your school? Yes No

9. Would the use of the telephone to bring specialists to your classroom aid you in <u>understanding</u> school subjects? Yes No

For other comments use back side

Please circle the appropriate answer:

1. TWO METHODS OF USING THE TELEPHONE WERE ATTEMPTED. THE FIRST METHOD INCLUDED THE LECTURE, QUESTION FORMULATING PERIOD, AND THE QUESTION PERIOD INCLUDED IN A ONE HOUR PERIOD. THE SECOND METHOD USED THE LECTURE ON ONE DAY AND THE QUESTION PERIOD ON THE FOLLOWING DAY. WHICH METHOD DID YOU PREFER? FIRST SECOND

2. WHICH METHOD DID THE STUDENTS PREFER?

3. DID THE SECOND METHOD CAUSE YOU ENOUGH PROBLEMS IN SCHEDULING CLASSES TO MAKE YOU QUESTION THE WORTH OF A SERIES OF PROGRAMS NEXT YEAR? YES NO

4. TWO APPROACHES WERE MADE TO THE LECTURE. THE FIRST AND SECOND LECTURES DEALT WITH SOCIAL HISTORY AND WERE DESIGNED TO STIMULATE THE INTEREST OF THE STUDENTS. THE THIRD LECTURE WAS MORE FACTUAL AND WENT MUCH MORE DEEPLY INTO THE SUBJECT AREA. WHICH TYPE DO YOU PREFER? FIRST SECOND

5. WHICH DID THE STUDENTS PREFER? FIRST SECOND

6. APPROXIMATELY THIRTY MINUTES WERE ALLOTTED TO THE LECTURE. WAS THIS ABOUT THE RIGHT AMOUNT OF TIME_____(YES OR NO) IF NO, THE AMOUNT OF TIME YOU WOULD SUGGEST_____

7. APPROXIMATELY THIRTY MINUTES WERE ALLOTTED FOR THE QUESTION PERIOD. WAS THIS ABOUT THE RIGHT AMOUNT OF TIME_____(YES OR NO) IF NO, WHAT WOULD YOU RECOMMEND?_____

8. AT OUR MEETING IN GUNNISON, WE DISCUSSED THE POSSIBILITY OF A SERIES OF TEN LECTURES NEXT YEAR. FIVE IN THE SOCIAL STUDIES AND FIVE IN OTHER AREAS. BASED ON THE RESULTS OF THIS PILOT PROGRAM, ARE YOU AND YOUR SCHOOL STILL INTERESTED IN PARTICIPATING IN SUCH A PROGRAM? YES NO

9. DO YOU FEEL THAT THE EQUIPMENT USED FOR THE LAST LECTURE WAS ADEQUATE FOR YOUR SITUATION? YES NO

10. IF YOUR ANSWER IS NO TO THE ABOVE QUESTION, GIVE REASONS ON BACK.

11. WHAT DO YOU ANTICIPATE WOULD BE YOUR GREATEST PROBLEM IN NEXT YEAR'S USE OF THE TELEPHONE?_____

_____

_____

12. DID THE PRESENCE OF A TELEPHONE COMPANY REPRESENTATIVE ASSIST YOU DURING THE PILOT PROGRAM? YES NO

13. THE TELEPHONE COMPANY WOULD LIKE SOME KIND OF A COMMITMENT FROM THE PARTICIPATING SCHOOLS FOR NEXT YEAR. INDICATE THE DOLLAR AMOUNT YOU FEEL YOUR BOARD WOULD BUDGET FOR LONG DISTANCE CALLS NEXT YEAR. $_____

14. DID THE SIZE OF YOUR GROUP REMAIN THE SAME FOR ALL LECTURES? YES NO
IF NO, DESCRIBE ON BACK

15. APPROXIMATELY HOW MANY VISITORS DID YOU HAVE? INCLUDE FACULTY BUT DO NOT INCLUDE STUDENTS FROM OTHER CLASSES (ALL THREE LECTURES)

_____

16. DO YOU FEEL THAT YOU USED THE BEST ROOM YOU HAD AVAILABLE? YES NO
IF NO, HOW WOULD YOU IMPROVE NEXT YEAR? ANSWER ON BACK

DEAR PARENTS:

DURING THE PAST MONTH, THE HIGH SCHOOL HAS BEEN PARTICIPATING IN A SERIES OF EXPERIMENTS USING THE LONG DISTANCE TELEPHONE. THESE EXPERIMENTS HAVE BEEN CONDUCTED WITH THE COOPERATION OF THE MOUNTAIN STATES TELEPHONE COMPANY, THE WESTERN STATES SMALL SCHOOLS PROJECT AND WESTERN STATE COLLEGE. THE PURPOSE OF THESE EXPERIMENTS HAS BEEN TO BRING TO OUR SCHOOL THE IDEAS OF EXPERT COLLEGE PROFESSORS BY MEANS OF SPECIAL LONG DISTANCE EQUIPMENT. AS PARENTS OF STUDENTS WHO HAVE BEEN PARTICIPATING IN THIS PROJECT, WE WOULD LIKE YOU TO COMPLETE THE FOLLOWING QUESTIONNAIRE. (PLEASE CIRCLE THE APPROPRIATE ANSWER.)

1. HAS YOUR CHILD INFORMED YOU FOR THE TELEPHONE EXPERIMENTS? YES NO

2. SINCE OUR SCHOOL IS SOMEWHAT ISOLATED, DO YOU APPROVE OF THE SCHOOL'S ATTEMPT TO PROVIDE OUR CHILDREN WITH NEW IDEAS FROM OUTSIDE THE COMMUNITY? YES NO

3. DOES YOUR CHILD THINK THAT THE TELEPHONE EXPERIMENTS WERE OF BENEFIT TO HIM IN HIS STUDIES? YES NO

4. WOULD YOU RECOMMEND THAT THE SCHOOL CONTINUE IN THE EXPERIMENTAL USE OF THE TELEPHONE TO BRING OUTSIDE SPEAKERS TO OUR COMMUNITY? YES NO

5. WOULD <u>YOU</u> BE INTERESTED IN OBSERVING A DEMONSTRATION OF THE TELEPHONE EXPERIMENT AT SOME TIME IN THE FUTURE? YES NO